CLAIMS

1-58. (Cancelled)

59. (Currently Amended) An iodine injection system for injecting iodine into gas flowing through a nozzle for a laser comprising:

~~a gas generator for producing a first gas;~~

~~a cavity that is in fluid communication with the gas generator;~~

~~a symmetric two-dimensional Minimum Length Nozzle (MLN) between the gas generator and the laser cavity, the MLN having:~~

a throat located at a first end of the ~~MLN~~ nozzle, the throat having a sharp corner ~~being in fluid communication with the gas generator and receiving a flow of the first gas from the gas generator~~;

a curved sonic line defining [[the]] a transonic boundary of the flowing ~~of the first~~ gas within the ~~MLN~~ nozzle; ~~and~~

at least one injection strut located within the nozzle and downstream of the throat, the strut injecting iodine into the flow of gas; and

an exit plane located at a second end of the ~~MLN~~ nozzle, the gas flowing through the exit plane being generally supersonic and generally uniform ~~the exit plane forming the boundary between the MLN~~ nozzle ~~and the laser cavity such that a flow of a second gas is output from the MLN and input into the laser cavity, and the flow of the second gas is generally uniform and generally supersonic; and~~

~~at least one injection strut located within the MLN and downstream of the throat, the strut injects iodine into the flow of the first gas~~.

60. (Currently Amended) The iodine injection system according to claim 59 wherein the nozzle has a kernel region and the strut is located near [[the]] a downstream end of the kernel region.

61. (Currently Amended) The iodine injection system of claim [[61]] 60 wherein [[the]] a downstream edge of the kernel region is located between 10% to 50% of the distance from the

throat [[and]] to the exit plane.

62. (Currently Amended) The iodine injection system of claim [[1]] 59 wherein the strut is located within 20% to 90% of the distance between the nozzle throat and the exit plane.

63. (Previously Presented) The iodine injection system according to claim 59 wherein a carrier gas is injected with the iodine.

64. (Previously Presented) The iodine injection system according to claim 63 wherein the carrier gas is helium.

65. (Previously Presented) The iodine injection system according to claim 63 wherein the carrier gas is nitrogen.

66. (Canceled)

67. (Canceled)

68. (Previously Presented) The iodine injection system according to claim 59 wherein the strut further comprises a heating element.

69. (New) The iodine injection system according to claim 59 wherein the gas flowing through the nozzle is oxygen.

70. (New) An iodine injection system for injecting iodine into a gas flowing through a nozzle for a laser comprising:

a throat connecting a convergent section and a downstream divergent section of the nozzle, the throat having a sharp corner;

a curved sonic line defining a transonic boundary of the flowing gas within the nozzle;

at least one injection strut located within the downstream divergent section of the nozzle and

downstream of the throat, the strut injecting iodine into the flow of gas; and

an exit plane located at a second end of the nozzle, the gas flowing through the exit plane being generally supersonic and generally uniform.

71. (New) The iodine injection system according to claim 70 wherein the nozzle has a kernel region and the strut is located near a downstream end of the kernel region.

72. (New) The iodine injection system of claim 70 wherein a downstream edge of the kernel region is located between 10% to 50% of the distance from the throat to the exit plane.

73. (New) The iodine injection system of claim 70 wherein the strut is located within 20% to 90% of the distance between the nozzle throat and the exit plane.

74. (New) The iodine injection system according to claim 70 wherein a carrier gas is injected with the iodine.

75. (New) The iodine injection system according to claim 70 wherein the carrier gas is helium.

76. (New) The iodine injection system according to claim 70 wherein the carrier gas is nitrogen.

77. (New) The iodine injection system according to claim 70 wherein the strut further comprises a heating element.

78. (New) The iodine injection system according to claim 70 wherein the gas flowing through the nozzle is oxygen.